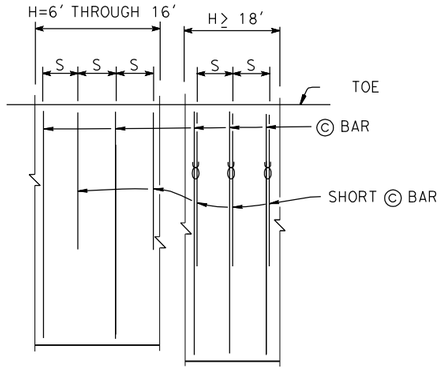
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
X	X	X	X	X	X

REGISTERED CIVIL ENGINEER _____ DATE X

PLANS APPROVAL DATE _____

REGISTERED PROFESSIONAL ENGINEER — No. X — Exp. X — CIVIL — STATE OF CALIFORNIA

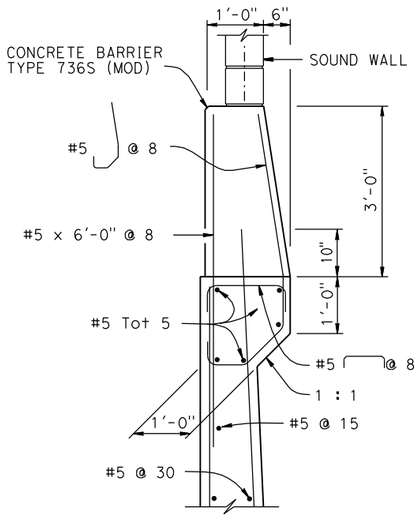
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



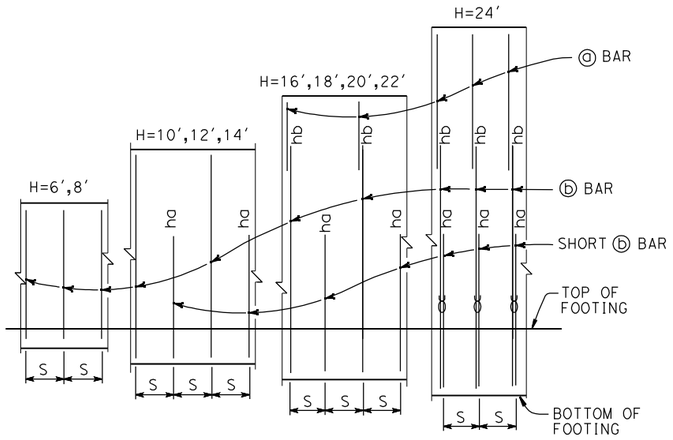
PLAN
NO SCALE

NOTES:

Only Ⓒ bars shown
"S" is Ⓒ bar spacing, see table
ϑ indicates 2 bar bundle.



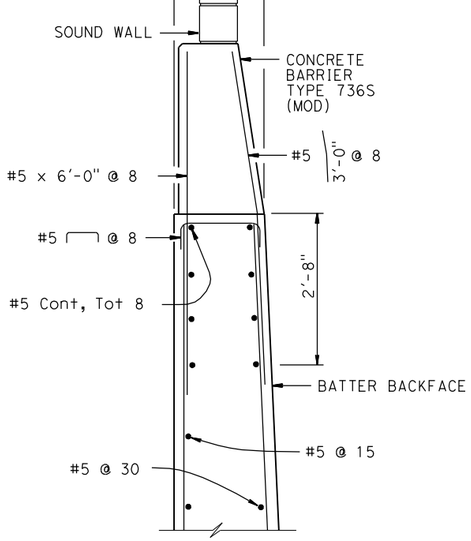
DETAIL A
¾″ = 1′-0″



ELEVATION
No scale

NOTES:

"ha" and "hb" above ⓑ bars indicate distance from top of footing to upper end of ⓑ bars, see table.
"S" is ⓑ bar spacing, see table.
ϑ indicates 2 bar bundle.



OPTIONAL DETAIL A
¾″ = 1′-0″

For details not shown, see "DETAIL A"

DESIGN DATA

Design: AASHTO LRFD Bridge Design Specifications 4th edition with California Amendments

WS: 33 psf on sound wall and barrier

LS: Varied surcharge on level ground surface

CT: 54 kip maximum traffic impact loading evenly distributed over 10 feet at top of the barrier and 1:1 distribution down and outward

EQE: Mononabe-Okabe Method
K_h = 0.3
K_v = 0.0

Soil: ø = 34°
γ = 120 pcf

Reinforced Concrete: f′c = 3600 psi
fy = 60,000 psi

Load Combinations and Limit States

Service I	Q=1.00DC+1.00EV+1.00EH+1.00LS+0.30WS
Service II	Q=1.00DC+1.00EV+1.00EH+1.00WS
Strength I	Q=αDC+βEV+1.50EH+1.75LS Q=1.25DC+1.35EV+0.90EH+1.75LS (for piles at heel)
Strength III	Q=αDC+βEV+1.50EH+1.40WS
Strength V	Q=αDC+βEV+1.50EH+1.35LS+0.40WS
Extreme I	Q=1.00DC+1.00EV+1.00EH+1.00EQD+1.00EQE
Extreme II	Q=1.00DC+1.00EV+1.00EH+1.00CT

Where:

Q: Force Effects
α: 1.25 or 0.90, Which ever Controls Design
β: 1.35 or 1.00, which ever Controls Design
DC: Dead Load of Structure Components
EV: Vertical Earth Fill Pressure
LS: Live Load Surcharge
EQE: Seismic Earth Pressure
EQD: Soil and Structure Components Inertia. Soil inertia ignored for stem design
WS: Wind Load on Sound Wall and Barrier
CT: Vehicular Collision Force

STANDARD DRAWING

FILE NO. xs14-370-2

APPROVAL DATE July 2011

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

BRIDGE NO. X

POST MILE X

X
RETAINING WALL TYPE 5SWBP-DETAILS NO. 2

DS OSD 2147A (ENGLISH STANDARD DRAWING "XS" BORDER REV. (02-02-11)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: X
PROJECT NUMBER & PHASE: X
CONTRACT NO.: X

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES

SHEET X OF X

FILE => $REQUEST

DATE PLOTTED => $DATE
TIME PLOTTED => $TIME
USERNAME => $USER